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WHAT IS CLAIMED IS:

1. A method of fabricating a transistor, comprising:

providing a semiconductor substrate having a surface;

forming a nitride layer outwardly of the surface of the substrate;

oxidizing the nitride layer to form a nitrided silicon oxide layer comprising an oxide layer beneath the nitride layer;

depositing a high-K layer outwardly of the nitride layer;

forming a conductive layer outwardly of the high-K layer;

patterning and etching the conductive layer, the high-K layer, and the nitrided silicon oxide layer to form a gate stack;

forming sidewall spacers outwardly of the semiconductor substrate adjacent to the gate stack; and

forming source/drain regions in the semiconductor substrate adjacent to the sidewall spacers.

2. The method of Claim 1, wherein forming the nitride layer comprises subjecting the surface of the substrate to plasma nitridation.

3. The method of Claim 1, wherein the thickness of the nitrided silicon oxide layer is less than about 20 Angstroms.

4. The method of Claim 1, wherein the high-K dielectric layer comprises an oxygen-containing material.

5. The method of Claim 1, wherein the high-K dielectric layer comprises a material selected from the group consisting of Ta_2O_5, $BaTiO_3$, TiO_2, CeO_2, and barium strontium titanate.

6. The method of Claim 2, wherein the plasma nitridation comprises high density plasma nitridation.

7. The method of Claim 2, wherein the plasma nitridation uses a nitrogen-containing precursor selected from the group consisting of N_2 or NH_3 or a mixture thereof with an inert gas.

8. The method of Claim 1, wherein the oxidizing occurs at a temperature in the range of 600 to 1000 °C.

9. The method of Claim 1, further comprising removing an oxide layer from the surface of the substrate before forming the nitride layer outwardly of the surface of the substrate.

10. A method of fabricating a transistor, comprising:

providing a semiconductor substrate having a surface;

forming a nitride layer outwardly of the surface of the substrate;

oxidizing the nitride layer to form a nitrided silicon oxide layer comprising an oxide layer beneath the nitride layer, wherein the thickness of the nitrided silicon oxide layer is less than about 20 Angstroms;

forming a conductive layer outwardly of the nitrided silicon oxide layer;

patterning and etching the conductive layer and the nitrided silicon oxide layer to form a gate stack;

forming sidewall spacers outwardly of the semiconductor substrate adjacent to the gate stack; and

forming source/drain regions in the semiconductor substrate adjacent to the sidewall spacers.

11. The method of Claim 10, wherein forming the nitride layer comprises subjecting the surface of the substrate to plasma nitridation.

12. The method of Claim 11, wherein said plasma nitridation comprises high density plasma nitridation.

13. The method of Claim 11, wherein the plasma nitridation uses a nitrogen-containing precursor selected from the group consisting of N_2 or NH_3 or a mixture thereof with an inert gas.

14. The method of Claim 10, further comprising removing an oxide layer from the surface of the substrate before forming the nitride layer outwardly of the surface of the substrate.

15. The method of Claim 14, wherein removing an oxide layer from the surface of the substrate comprises stripping the surface of the substrate with hydrofluoric acid.

16. A semiconductor structure, comprising:

a semiconductor substrate having a surface;

a gate stack outward of the surface of the semiconductor substrate, the gate stack comprising:

a nitrided silicon oxide layer comprising an oxide layer beneath a nitride layer;

a high-K dielectric layer outward of the nitrided silicon oxide layer; and

a conductive layer outward of the high-K layer;

sidewall spacers outward of the semiconductor substrate adjacent to the gate stack; and

source/drain regions in the semiconductor substrate adjacent to the sidewall spacers.

17. The semiconductor structure of Claim 16, wherein:

the nitride layer has a maximum atomic percentage of nitrogen of between 10 and 20 percent; and

the oxide layer has a maximum atomic percentage of nitrogen of between 8 and 14 percent.

18. The semiconductor structure of Claim 16, wherein a thickness of the nitrided silicon oxide layer is less than about 20 Angstroms.

19. The semiconductor structure of Claim 16, wherein the high-K dielectric layer comprises an oxygen-containing material.

20. The semiconductor structure of Claim 16, wherein the high-K dielectric layer comprises a material selected from the group consisting of Ta_2O_5, $BaTiO_3$, TiO_2, CeO_2, and barium strontium titanate.